<u>REMARK</u>

Applicant respectfully requests reconsideration of this application as amended. Claims <u>1</u> and <u>5-19 and 23-32</u> remain in the application. Claim 15 has been amended. No further claims have been canceled or added.

<u>Rejections under 35 U.S.C. § 102(e)</u>

Applicant's claims <u>1, 5-14, 19 and 23-32</u> have been rejected under 102(e) as being anticipated by Voit, US Patent No. 6,424,657. Applicant does not admit that Voit is prior art and reserves the right to swear behind the reference at a later date. Nonetheless, Applicant respectfully submits that Voit does not disclose each and every element of the invention as claimed in claims 1, 5-14, 19 and 23-32.

Voit discloses a switch capable of examining and selectively forwarding packets based on higher layer information in the protocol stack. The switch enables segregation of upstream traffic by Ethernet type and downstream aggregation of Internet traffic with traffic from a local vertical services domain. The switch determines how to selectively forward upstream PPPoE and non-PPPoE data packets based on the Ethertype information contained in the Ethernet frame header (Voit, Col. 19, lines 39-53), not based on the address stored in the number of IP data packets. Voit's switch <u>forwards all PPPoE traffic to the ISP</u> while <u>sending all other Ethernet traffic to the vertical services domain</u> (Voit, Col. 15, lines 50-57, Figure 2: ISP #11, Virtual Service Domain #13). Furthermore, because Voit's switch makes forwarding decisions based on the Ethernet frame header, Voit's switch does not deencapsulate the Ethernet frame header from the packet. For example, as shown in Figure 2, packets transmitted from the IP packet is encapsulated with an Ethernet frame throughout the traffic flow from the customer premise (i.e. 10Base-T network) to the ISP and Vertical Service Domain networks.

Applicant respectfully submits that Voit does teach or suggest Applicant's claims. In particular, Voit discloses <u>forwarding traffic based on Ethernet information, not the IP address</u> and <u>retaining, not removing, the Ethernet header.</u>

In contrast, Applicant independent claims 1, 5, 10, 19, 23 and 28 are directed towards deencapsulating IP packets from IP over Ethernet or IP over PPPoE encapsulation and forwarding the packets based on the IP address. For example, claims 1 and 19 require "<u>deencapsulating</u> the number of <u>Internet Protocol (IP) packets having the IP over Ethernet encapsulation</u>; deencapsulating the number <u>of Internet Protocol (IP) packets</u> having the <u>Point-to-Point Protocol over Ethernet encapsulation</u>; and <u>forwarding</u> the number of <u>Internet Protocol (IP) packets</u> having the IP over Ethernet encapsulation and the Point-to-Point Protocol over Ethernet encapsulation <u>based on an address stored in the number of Internet Protocol (IP) packets</u>".

As another example, claims 5 and 23 require "<u>removing the Ethernet header from the number of IP packets</u>; ... removing the PPP header and the PPPoE header from the number of IP packets within the PPP over Ethernet; removing the <u>Ethernet header from the number of IP packets within the PPP over Ethernet</u>; and <u>forwarding the number of IP packets</u> over Ethernet and the number of IP packets within PPP over Ethernet <u>based on the IP address</u>".

Furthermore, claim 10 and 28 requires "upon determining that a received data packet is an Internet Protocol (IP) packet over Ethernet on the real circuit, <u>removing an Ethernet header from the received data packet and forwarding the IP packet based on an IP address stored in the IP packet</u>; and upon determining that a received data packet is an IP packet within a Point-to-Point Protocol (PPP) over Ethernet on one of the number of virtual circuits, <u>removing an Ethernet header, a PPP header and a PPP over Ethernet (PPPoE) header</u> from the data packet and <u>forwarding the IP packet based on an IP address stored in the IP packet</u>".

The above quoted limitations are not described or suggested by Voit. While there are various uses for the invention as claimed, several such uses are discussed at page 4, lines 2 – 14 and page 8, line 4 – page 11, line 14. Thus, while the invention is not limited to the uses

discussed on these pages, it should be understood that Voit does not enable these uses and the above quoted limitations do.

For at least these reasons, Applicant respectfully submits that independent claims 1, 5, 10, 19, 23 and 28 are allowable. Furthermore, Applicant respectfully submits that claims 6-9, 11-14, 24-27 and 29-32 are allowable for at least the reason that they are dependent on an allowable independent claim.

Applicant will likely choose to swear behind Voit (in effort to move the case to allowance and not by way of agreement with this rejection) if this rejection is maintained in the first office action (since this 102 rejection was first made in the final office action and this is Applicant first time to respond to it, Applicant believes that the first office action will be non-final). With regard to the swearing behind, Applicant respectfully requests the Examiner to see submission of the Information Disclosure Sheet on June 29, 2004 and comments regarding the references in Applicant's Office Action response date June 29, 2004 on page 16.

Rejections under 35 U.S.C. § 103(a)

Applicant's claims 15-18 have been rejected under 103(a) as being obvious over Voit in view of Tal, US Patent No. 6,662,254. Similar to Voit, Tal would only qualify as prior art only under 35 U.S.C. § 102(e). Applicant does not admit that Tal is prior art and reserves the right to swear behind the reference at a later date. Nonetheless, Applicant respectfully submits that the combination is improperly motivated and furthermore does not teach each and every element of the invention as claimed in claims 15-18.

Tal discloses an IP router based on an enhanced backplane that supports independently working data busses, where each data bus is utilized for a different data type. The router utilizes a router and several I/O modules. The router module examines each incoming IP packet and encapsulates the packet within an internally added Ethernet frame that designates the destination I/O module. The destination I/O module switches the IP packet based on the specialized frame.

Applicant respectfully submits that there is no suggestion or motivation to combine Voit and Tal. "If [the] proposed modification would render the prior art invention unsatisfactory for the its intended purpose, then there is no suggestion or motivation to make the proposed modification" (MPEP, p. 2100-133). Voit disclosing switching based on the existing Ethernet layer information, while Tal discloses forwarding packets based on the IP address information using an internally added Ethernet frame. A combination of Voit's switch and Tal's IP router would result in a device that forwards packets based on the packet's existing Ethernet frame, but also encapsulates packets with a special Ethernet frame based on IP address. These functions are incompatible for the same data packet and causes one of the references to no longer perform in the manner they were intended. Therefore, Applicant respectfully submits that the combination is improper for lack of appropriate suggestion or motivation to combine.

Nevertheless, even assuming the combination is proper, Applicant respectfully submits that the combination of Tal's router (Tal, Col. 3, line 59 – Col. 4, line 3) with Voit's switching of IPoE and PPPoE would not teach Applicant's invention as claimed in claims 15-18. The combination would have Voit's switch that forwards all IP over PPPoE data packets to the ISP and forwards all IPoE packets to the vertical services domain with Tal's router that encapsulates IP packets with specialized Ethernet frames. However, this is not what is claimed in Applicant's claims.

Applicant's independent claim 15, as amended, is directed to deencapsulating IP packets having IP over Ethernet or PPPoE over Ethernet encapsulation. Furthermore, IP packets are forwarded based on the IP address stored in the IP packet. For example, claim 15, as amended, requires "a number of input/output (I/O) cards coupled to a number of real circuits, wherein each of the number of real circuits include at least one virtual circuit, the number of I/O cards to receive a number of Internet Protocol (IP) packets over Ethernet having an IP over Ethernet encapsulation on the real circuit, to receive a number of IP packets within a Point-to-Point Protocol (PPP) over Ethernet encapsulation on the at least one virtual circuit, to deencapsulate

the number of Internet Protocol (IP) packets having the IP over Ethernet encapsulation and to deencapsulate the number of Internet Protocol (IP) packets having the Point-to-Point Protocol over Ethernet encapsulation; and a forwarding card having an IP address table, the forwarding card to receive the number of IP packets from the number of I/O cards and to forward the IP packets based on the IP address stored in the IP packet and the IP address table.

The above quoted limitations are not described or suggested by the combination. While there are various uses for the invention as claimed, several such uses are discussed at page 8, line 4 – page 11, line 14. Thus, while the invention is not limited to the uses discussed on these pages, it should be understood that the combination of Tal and Voit does not enable these uses and the above quoted limitations do.

For at least these reasons, Applicant respectfully submits that independent claim 15 is allowable. The Applicant respectfully submits that dependant claims 16-18 are allowable for at least the reason that they are dependent on an allowable independent claim.

Conclusion

Applicant respectfully submits that the rejections have been overcome by the amendments and remarks, and that the Claims as amended are now in condition for allowance. Accordingly, Applicant respectfully requests the rejections be withdrawn and the Claims as amended be allowed.

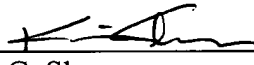*Invitation for a telephone interview*

The Examiner is invited to call the undersigned at 408-720-8300 if there remains any issue with allowance of this case.

Charge our Deposit Account

Please charge any shortage to our Deposit Account No. 02-2666.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Date: ___z/3___, 2005 _____

Kevin G. Shao
Reg. No. 45,095

12400 Wilshire Boulevard
Seventh Floor
Los Angeles, California 90025-1026
(408) 720-8300